Patent Claims

1. A clamp connector (1) for at least two aligned flexible ribbon cables (2, 3), comprising a base piece (4), spring elements (5) for pressing together the surfaces being contacted, and a mating piece (6), wherein the base piece (4) and the mating piece (6) can be attached to each other in a prelocking position and in a final locking position, characterized in that
the at least two flexible ribbon cables, with their respective subregions stripped of insulation for contact, are pressed on each other and
the sides of the base piece (4) and of the mating piece (6) facing the flexible ribbon cables (2, 3) being connected have complementary depressions (7) or projecting reliefs (8), by means of which the flexible ribbon cables (2, 3) are guided for formation of a strain relief.

2. The clamp connector according to claim 1, further characterized in that the spring element (5) has a number of steel springs (5a, 5b, ...), caulked in the base piece (4), corresponding to the number of conductive tracks of the flexible ribbon cables (2, 3).

3. The clamp connector according to claim 2, further characterized in that the steel springs (5a, 5b) are centrally caulked strips, the respective two ends of which are spirally wound inward.

4. The clamp connector according to claim 3, further characterized in that the mating piece (6) has a cross rib (9) between the support sites of the steel springs (5a, 5b).

5. The clamp connector according to one of claims 1 to 4, further characterized in that the base piece (4) has a bottom plate (10) and two side walls (11a, 11b), on which catches are arranged for the prelocking position and the final locking position of the mating piece (6).

6. The clamp connector according to one of claims 1 to 5, further characterized in that the ribs (8) formed on the base piece (4) and on the mating piece (6) run transverse to the longitudinal direction of the flexible ribbon cables (2, 3) and form terminal stops for the head ends of the flexible ribbon cables (2, 3) being connected.

7. The clamp connector according to claim 1 or 2, further characterized in that the base piece (4) has a recess (13), through which two bare flexible ribbon cables (2, 3), which are arranged on the top side and the bottom side of the base piece (4), are pressed against each other by respective spring elements (5), which are arranged on the mating pieces (6a, 6b) locked at the top side and the bottom side of the base piece.

8. The clamp connector according to claim 7, further characterized in that the strain relief is formed by lances (14) engaging in slots (15) provided in the respective flexible ribbon cables .

9. The clamp connector according to claim 7 or 8, further characterized in that the spring elements or a spring element (5) are (is) constructed as contact springs with lateral protrusion (16) as a ground tap and the flexible ribbon cable(s) (2, 3) is (are) stripped of insulation on both sides.

10. The clamp connector according to one of claims 7 to 9, further characterized in that each of the two mating pieces (6a, 6b) has a terminal stop shoulder (17) for the head end of the respective flexible ribbon cable (2, 3).

11. The clamp connector according to one of claims 7 to 10, further characterized in that,

for formation of a Y connector, two flexible ribbon cables (2, 3) are inserted on the two sides of the base piece (4) with their head end in the same direction and the base piece (4) has a slot (18), roughly at the level of its meridian plane between its top side and its bottom side, for inserting a third flexible ribbon cable (19), the front region of which is stripped of insulation on both sides and which crosses the recess (13) in the base piece (4) and is supported, at the opposite-lying edge of the recess (13), in a receiving groove (20), and the spring elements (5) press together all three flexible ribbon cables (2, 3, 19) in the region of the recess (13).

12. The clamp connector according to one of claims 7 to 11, further characterized in that the third flexible ribbon cable (19) passes out of the base piece (4) at the end thereof, which is placed opposite the end from which the first two flexible ribbon cables (2, 3) project.

13. The clamp connector according to one of claims 7 to 12, further characterized in that the spring elements (5) in each mating piece (6a, 6b) each originate from a common base plate (4, 22), which, together with the base plate (22) of the spring element (5) arranged on the other mating piece (6a, 6b), forms a closed shielding (21) around the contact site of the flexible ribbon cables (2, 3).

14. The clamp connector according to claim 13, further characterized in that the base plates (22) of the spring elements (5) rest on the flexible ribbon cables (2, 3) with side walls that pass through cross slots (23) in the base piece (4) and that are provided with elastic spring arms (24), the side walls of the two base plates (22) being essentially aligned flush with each other.

15. The clamp connector according to one of claims 12 to 14, further characterized in that terminal stops (25) for the flexible ribbon cables (2, 3) are arranged on the base piece (4) on both sides.